

Patent Claims

1. A method of feeding a printer (2) with individual sheets (31), the printer (2) comprising a sheet draw-in arrangement (3), which operates at a draw-in speed (v3), and produces control commands by means of which in each case one sheet is requested, the method comprising the following steps:
 - receiving a control command, by means of which a sheet is requested;
 - accelerating a paper web (8) to a desired advancement speed (v1), which is equal to the draw-in speed (v3) of the sheet draw-in arrangement (3) of the printer (2);
 - severing an individual sheet (31) from the paper web (8) as the paper web is moved at the desired advancement speed (v1);
 - directly feeding the severed individual sheet (31) to the sheet draw-in arrangement (3), the individual sheet (31) being conveyed further at a conveying speed (v2), which is likewise equal to the draw-in speed (v3) of the sheet draw-in arrangement (3) of the printer (2).
2. The method as claimed in claim 1, wherein the paper web (8) is severed by a rotary cutting device which has at least one cutting blade (20), which has a cutting edge and is clamped into a cylinder (19) which can be driven in rotation, and a mating element (23), which interacts with the cutting blade (20).
3. The method as claimed in claim 2, wherein the cylinder (19) provided with the cutting blade (20)

is driven periodically at such a speed that the cutting edge of the cutting blade (20), as it comes together with the paper web (8), has a movement speed which is equal to or greater than the desired advancement speed (v1) of the paper web (8).

4. The method as claimed in claim 1, wherein the paper web (8) is drawn off from a supply roll (7).
5. The method as claimed in claim 1, wherein the advancement speed (v1) of the paper web (8) is reduced in each case following severing of an individual sheet (31) and, on account of a new control command, is increased again to the desired advancement speed (v1), which corresponds to the draw-in speed (v3) of the sheet draw-in arrangement (3).
6. The method as claimed in claim 5, wherein the paper web (8) is stopped in each case following severing of an individual sheet (31) and then is accelerated again from a standstill to the desired advancement speed (v1).
7. The method as claimed in claim 5 or 6, wherein, in relation to the point in time (t1) at which the paper web (8) reaches its desired advancement speed (v1), the severing of an individual sheet (31) is delayed by a time interval (t3-t1), the length of this time interval (t1-t3) being determined by the desired format length of the individual sheet (31) which is to be severed, the format length being measured in the conveying direction (A) of the paper web (8).
8. An arrangement for feeding a printer (2) with individual sheets (31), having a store (6) for a paper web (8), having an advancement arrangement

(11) for advancing the paper web (8), having a severing device (12), which is arranged downstream of the advancement arrangement (11) and is intended for severing individual sheets (31) from the paper web (8) on account of a sheet-requesting control command, and having a conveying device (13), which is arranged downstream of the severing device (12) and is intended for feeding the severed individual sheets (31) to the sheet draw-in arrangement (3) of a printer (2), wherein the advancement arrangement (11) moves the paper web (8) to the severing device (12) at a desired advancement speed (v1), which is equal to the draw-in speed (v3) of the sheet draw-in arrangement (3) of the printer (2), wherein the severing device severs in each case one individual sheet (31) from the paper web (8) as the paper web moves at the desired advancement speed (v1), and wherein the conveying device (13) conveying the severed individual sheets (31) on directly to the sheet draw-in arrangement (3) at a conveying speed (v2), which is likewise equal to the draw-in speed (v3) of the sheet draw-in arrangement (3) of the printer (2).

9. The arrangement as claimed in claim 8, which comprises a rotatably mounted supply roll (7) which forms the paper-web store (6) and comprises a wound-up paper web (8).

10. The arrangement as claimed in claim 8, wherein the severing device (12) is a rotary cutting device which has at least one cutting blade (20), which is clamped into a cylinder (19) which can be driven in rotation, and a mating element (23), which interacts with said cutting blade.

11. The arrangement as claimed in claim 10, wherein the cylinder (19) bearing the cutting blade (20)

is brought to a standstill in each case following severing of an individual sheet (31) and is set in rotation again for a new severing operation.

- 5 12. The arrangement as claimed in claim 10, wherein the mating element is a fixed mating blade (23) extending transversely to the advancement direction (A) of the paper web (8).
- 10 13. The arrangement as claimed in claim 10, wherein the cylinder (19) provided with the cutting blade (20) is driven periodically at such a speed that the cutting edge of the cutting blade (20), as it comes together with the paper web (8), has a movement speed which is equal to or greater than
15 the advancement speed (v_1) of the paper web (8).
14. The arrangement as claimed in claim 8, wherein the conveying device (13) is driven continuously.
- 20 15. The arrangement as claimed in claim 8, wherein the advancement arrangement (11) is brought to a standstill in each case following severing of an individual sheet (31) and is switched on again on
25 account of a new sheet-requesting control command.
16. The arrangement as claimed in claim 10, wherein the advancement arrangement (11) is brought to a standstill in each case following severing of an individual sheet (31) and is switched on again on
30 account of a new sheet-requesting control command, and wherein the cylinder (19) bearing the cutting blade (20) is set in rotation from a standstill with a time delay in each case in relation to the
35 point in time (t_1) at which the paper web (8) reaches its desired advancement speed (v_1).
17. The arrangement as claimed in claim 10, wherein the cylinder (19) bearing the cutting blade (20)

is accelerated following the cutting and is brought to a standstill prior to a new severing operation.

- 5 18. The arrangement as claimed in claim 10 having a non-mechanically operating high-speed printer (2), in particular a laser printer, which processes individual sheets (31).